

# 17



1600

## RAW SEQUENCE LISTING

DATE: 04/04/2002

PATENT APPLICATION: US/09/389,537B

TIME: 10:12:21

Input Set : A:\DIVER1240-3.ST25.txt

Output Set: N:\CRF3\04032002\I389537B.raw

ENTERED

P.S

2 <110> APPLICANT: DIVERSA CORPORATION  
 3 WARREN, Patrick  
 4 SWANSON, Ronald  
 6 <120> TITLE OF INVENTION: TRANSAMINASES AND AMINOTRANSFERASES  
 8 <130> FILE REFERENCE: DIVER1240-3  
 10 <140> CURRENT APPLICATION NUMBER: US 09/389,537B  
 11 <141> CURRENT FILING DATE: 1999-09-02  
 13 <150> PRIOR APPLICATION NUMBER: US 08/646,590  
 14 <151> PRIOR FILING DATE: 1996-05-08  
 16 <150> PRIOR APPLICATION NUMBER: US 08/599,171  
 17 <151> PRIOR FILING DATE: 1996-02-09  
 19 <160> NUMBER OF SEQ ID NOS: 40  
 21 <170> SOFTWARE: PatentIn version 3.0  
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67 <400> SEQUENCE: 4
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74 <213> ORGANISM: Artificial sequence
76 <220> FEATURE:
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80 ccgacaattg attaaagagg agaaattaac tatgtgggaa ttagacccta aa 52
83 <210> SEQ ID NO: 6
84 <211> LENGTH: 30
85 <212> TYPE: DNA
86 <213> ORGANISM: Artificial sequence
88 <220> FEATURE:
89 <223> OTHER INFORMATION: Primer for PCR
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92 tcgaactttt tctccacatc cctaggaggc 30
95 <210> SEQ ID NO: 7
96 <211> LENGTH: 52
97 <212> TYPE: DNA
98 <213> ORGANISM: Artificial sequence
100 <220> FEATURE:
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103 <400> SEQUENCE: 7
104 ccgacaattg attaaagagg agaaattaac tatgacatac ttaatgaaca at 52
107 <210> SEQ ID NO: 8
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156 <211> LENGTH: 31
157 <212> TYPE: DNA
158 <213> ORGANISM: Artificial sequence
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161 <223> OTHER INFORMATION: Primer for PCR
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167 <210> SEQ ID NO: 13
168 <211> LENGTH: 52
169 <212> TYPE: DNA
170 <213> ORGANISM: Artificial sequence
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192 <211> LENGTH: 52
193 <212> TYPE: DNA
194 <213> ORGANISM: Artificial sequence
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205 <212> TYPE: DNA
206 <213> ORGANISM: Artificial sequence
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209 <223> OTHER INFORMATION: Primer for PCR
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212 acctagtggacacataat ctctagaagg c 31

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Input Set : A:\DIVER1240-3.ST25.txt

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215 &lt;210&gt; SEQ ID NO: 17

216 &lt;211&gt; LENGTH: 1245

217 &lt;212&gt; TYPE: DNA

218 &lt;213&gt; ORGANISM: Aquifex

220 &lt;400&gt; SEQUENCE: 17

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223	ttctctctcg	ttaacgaact	caagtacaag	ctaaggcgtg	aaggcgaaga	tgtagtggtat	120
225	cttggtatgg	gcaatcctaa	catgcctcca	gcaaagcaca	taatagataa	actctgcgaa	180
227	gtggctcaaa	agccgaacgt	tcacggatat	tctgcgtcaa	ggggcatacc	aagactgaga	240
229	aaggctatat	gtaacttcta	cgaagaaagg	tacggagtga	aactcgaccc	tgagagggag	300
231	gctatactaa	caatcgggtg	aaaggaaggg	tattctcatt	tgatgcttgc	gatgatattct	360
233	ccgggtgata	cggtaatagt	tcctaatacc	acctatccta	ttcactatta	cgctcccata	420
235	attgcaggag	gggaagttca	ctcaataccc	cttaacttct	cggacgatca	agatcatcag	480
237	gaagagtttt	taaggaggct	ttacgagata	gtaaaaaccg	cgatgccaaa	acccaaggct	540
239	gtcgtcataa	gctttcctca	caatccaacg	accataacgg	tagaaaagga	cttttttaaa	600
241	gaaatagtta	agtttgcaaa	ggaacacggt	ctctggataa	tacacgattt	tgcgtagtgcg	660
243	gatatagcct	ttgacggtta	caagccccc	tcaatactcg	aaatagaagg	tgctaaagac	720
245	gttgcggttg	agctctactc	catgtcaaa	ggcttttcaa	tggcgggctg	gagggtagcc	780
247	tttgcgttg	gaaacgaaat	actcataaaa	aaccttgac	acctcaaaag	ctacttggtat	840
249	tacgggtata	ttactcccat	acaggtggcc	tctattatcg	cattagagag	cccctacgaa	900
251	atcgtggaaa	aaaccgcaaa	ggtttacca	aaaagaagag	acgttctggt	ggaagggtta	960
253	aacaggctcg	gctggaaagt	aaaaaaacct	aaggctacca	tgctcgtctg	ggcaaagatt	1020
255	cccgaatgga	taaatatgaa	ctctctggac	ttttccttgt	tcctcctaaa	agaggcgaag	1080
257	gttgcggtat	ccccgggtgt	gggctttggt	cagtacggag	aggggtacgt	aaggtttgca	1140
259	cttgtagaaa	atgaacacag	gatcagacag	gctataaggg	gaataaggaa	agccttcaga	1200
261	aaactccaga	aggagaggaa	acttgaacct	gagagaagtg	cttaa		1245

264 &lt;210&gt; SEQ ID NO: 18

265 &lt;211&gt; LENGTH: 1122

266 &lt;212&gt; TYPE: DNA

267 &lt;213&gt; ORGANISM: Aquifex

269 &lt;400&gt; SEQUENCE: 18

270	atggacaggc	ttgaaaaagt	atcacccttc	atagtaatgg	atatacctagc	tcaggcccag	60
272	aagtacgaag	acgtagtaca	catggagata	ggagagccc	atttagaacc	gtctcccaag	120
274	gtaatggaag	ctctggaacg	tgcggtgaag	gaaaagacgt	tcttctacac	ccctgctctg	180
276	ggactctggg	aactcaggga	aaggatatcg	gagttttaca	ggaaaaagta	cagcgttgaa	240
278	gtttctccag	agagagtcac	cgtaactacc	ggaacttcgg	gagcgtttct	cgtagcctac	300
280	gccgtaacac	taaatacggg	agagaagata	atcctcccag	acccctctta	cccctgttac	360
282	aaaaactttg	cctacctctt	agacgctcag	ccggttttcg	taaacgttga	caaggaaacg	420
284	aattacgaag	taaggaaaaga	gatgatagaa	gacattgatg	cgaaagccct	tcacatttcc	480
286	tcgcctcaaa	accctacggg	cacactctac	tcacctgaaa	ccctgaaggga	acttgcgag	540
288	tactgcgaag	agaaggggtat	gtacttcata	tccgacgaga	tttaccacgg	actcgtttac	600
290	gaaggtaggg	agcacacagc	acttgagttc	tctgacaggg	ctattgtcat	aaacggggtt	660
292	tctaagtact	tctgtatgcc	aggtttcagg	atagggtgga	tgatagttcc	ggaagaactc	720
294	gtgagaaagg	cggaaatagt	aattcagaac	gtatttatat	ctgccccgac	gctcagtcag	780
296	tacgccgccc	ttgaggcttt	tgattacgag	tatttgagga	aggtaaagaa	aacctttgaa	840
298	gagaggagga	acttccttta	tggggaactg	aaaaaactct	tcaagataga	cgcgaaacct	900
300	cagggagcct	tttacgtatg	ggcaaacata	agtgattact	ccacagatag	ctacgaattt	960
302	gctttaaaac	ttttaaggga	ggcgaggggtg	gcggtaacgc	ccgggggtgga	ctttggaaaa	1020
304	aacaaaacga	aggagtatat	aaggtttgct	tatacgagaa	agatagaaga	acttaaggag	1080

RAW SEQUENCE LISTING  
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310 <211> LENGTH: 1362
311 <212> TYPE: DNA
312 <213> ORGANISM: Aquifex
314 <400> SEQUENCE: 19
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317 ttaccacaga tgaaagtcta cagagaagaa gaaaacctga tatttgaacg cggagaaggc 120
319 gtttacctgt gggacatata cggcaggaag tatatagatg ccatactctc cctctggtgc 180
321 aacgtccacg gacataacca ccctaaactg aacaacgcag ttatgaaaca gctctgtaag 240
323 gtagctcaca caactactct gggaagttcc aacgttcccg ccatactcct tgcaaagaag 300
325 cttgtagaaa tttctcctga aggtttaaag aaggtctttt actccgaaga cgttgcgga 360
327 gcagtagaga tagcgataaa gatggcttat cactactgga agaacaaggg agttaaggg 420
329 aaaaacgttt tcataacgct ttccgaagcc taccacgggg ataactgtag agcggtagc 480
331 gtagggggta tagaactctt ccacggaact tataaagatc tccttttcaa gactataaaa 540
333 ctcccatctc cttacctgta ctgcaaggaa aagtacgggg aactctgccc tgagtgcacg 600
335 gcagatttat taaaacaact ggaagatata ctgaagtcgc gggaagatat cgttgcggtc 660
337 attatggaag cgggaattca ggcagccgcg ggaatgctcc cttccctcc gggatttttg 720
339 aaaggcgtaa gggagcttac gaagaaatac gacactttaa tgatagttga cgaggttgcc 780
341 acgggatttg gcaggacggg aacgatgttt tactgtgagc aggaaggagt cagtcgggac 840
343 tttatgtgtc taggttaagg tataaccgga gggtagctcc cgttgctgc gactacaca 900
345 acggacgagg tgttcaatgc ctttttaggt gagttcgggg aggcaaagca cttttaccac 960
347 gggcacacct acactgaaa taacctcgcc tgttcggtt cactcgcaa cttagaagtt 1020
349 tttgaggaag aaagaacttt agagaagtc caaccaaaga taaagctttt aaaggaaagg 1080
351 cttcaggagt tctgggaact caagcacgtt ggagatgta gacagctagg tttatggct 1140
353 ggaatagagc tgggtgaagga caaagaaaag ggagaacctt tcccttacgg tgaaaggacg 1200
355 ggatttaagg tggcttacaa gtgcaggaa aaaggggtgt ttttgagacc gctcggagac 1260
357 gttatggtat tgatgatgcc tcttgtaata gaggaagacg aaatgaacta cgttattgat 1320
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364 <212> TYPE: DNA
365 <213> ORGANISM: Aquifex
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370 gtttacctgt acgatgagga aggaaaggag tatcttgact ttgtctccg tataggcgtc 120
372 aactccctcg gtcacgctta cccaaaactc acagaagctc taaaagaaca ggttgagaaa 180
374 ctccctccacg tttcaaactt ttacgaaaac cgttggcagg aagaactggc tcacaaactt 240
376 gtaaaacact totggacaga agggaaggta tttttcgcaa acagcggaac ggaaagtgt 300
378 gaggcggcta taaagctcgc aagggaagta tggagggata aaggaaagaa caagtggaa 360
380 tttatatcct ttgaaaactc tttccacggg agaacctacg gtagcctctc cgcaacggga 420
382 cagccaaagt tccacaaagg ctttgaacct ctagtctctg gattttctta cgcaaagctg 480
384 aacgatatag acagcgttta caaactocta gacgaggaaa ccgcggggat aattattgaa 540
386 gttatacaag gagaggggcg agtaaacgag gcgagtggag attttctaag taaactccag 600
388 gaaatttgta aagaaaaaga tgtgtcttta attatagacg aagtgcacac gggaatagga 660
390 aggaccgggg aattctacgc atatcaacac ttcaatctaa aaccggacgt aattgcgctt 720
392 gcgaaggggac tcggaggagg tgtgccaata ggtgccatcc ttgcaaggga agaagtggcc 780
394 cagagcttta ctcccggtc ccacggctct accttoggag gaaacctctt agcctgcagg 840
396 gcgggaacag tggtagtaga tgaagttgaa aaactcctgc ctacgtaag ggaagtgggg 900

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Use of n and/or Xaa has been detected in the Sequence Listing.  
Review the Sequence Listing to insure a corresponding  
explanation is presented in the <220> to <223> fields of  
each sequence using n or Xaa.

RAW SEQUENCE LISTING ERROR SUMMARY  
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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:35; N Pos. 986  
Seq#:36; Xaa Pos. 329